



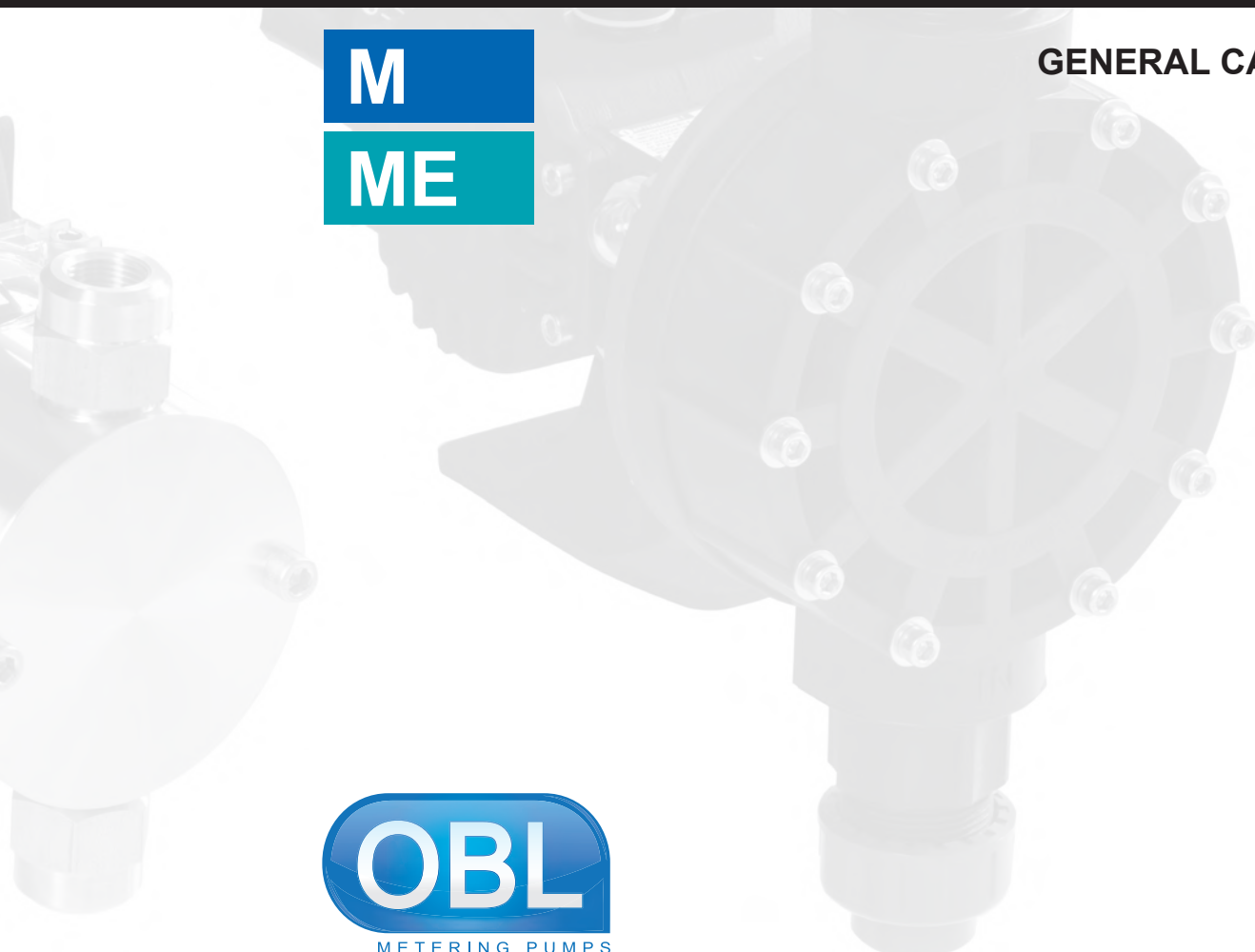
WATER DIVISION



M

ME

GENERAL CATALOGUE



Motor UNEL-MEC:
 Motor UNEL-MEC standard 3 phase, 50/60Hz. Single phase and ATEX options available.
Promotes standardization and enables immediate motor availability on site.

Anodized Aluminum Casing:
 Improved corrosion resistance against aggressive fumes.
Extends pump life and lowers life-cycle cost.

Spring return mechanism with oversized bearing.
 Extends pump life and lowers life-cycle cost.

Increased number of pumphead locking screw (12 pcs in large models).
 Reliable and effective sealing during operation.



3pcs threaded connector (PP models), Metric or Inch standard:
 BSP or NPT thread allows easy and simple connection to pipeline.
Reduces cost and time of installation and maintenance.

Double check valves are standard on models with flowrates up to 50 l/h, optional on flows up to 155 l/h.
 Increased accuracy when operating at low flow.
Greater flexibility of applications

STURDIER

NEW DESIGN

ATEX

i ALL models comply with ATEX (2014/34/CE) Group II, Category 3 (zone 2/22).

PVDF pumphead:
 Combination of PVDF pumphead, PTFE seats and PYREX check valves provides broad chemical compatibility.
Allows standardization on one configuration covering multiple liquids and applications.

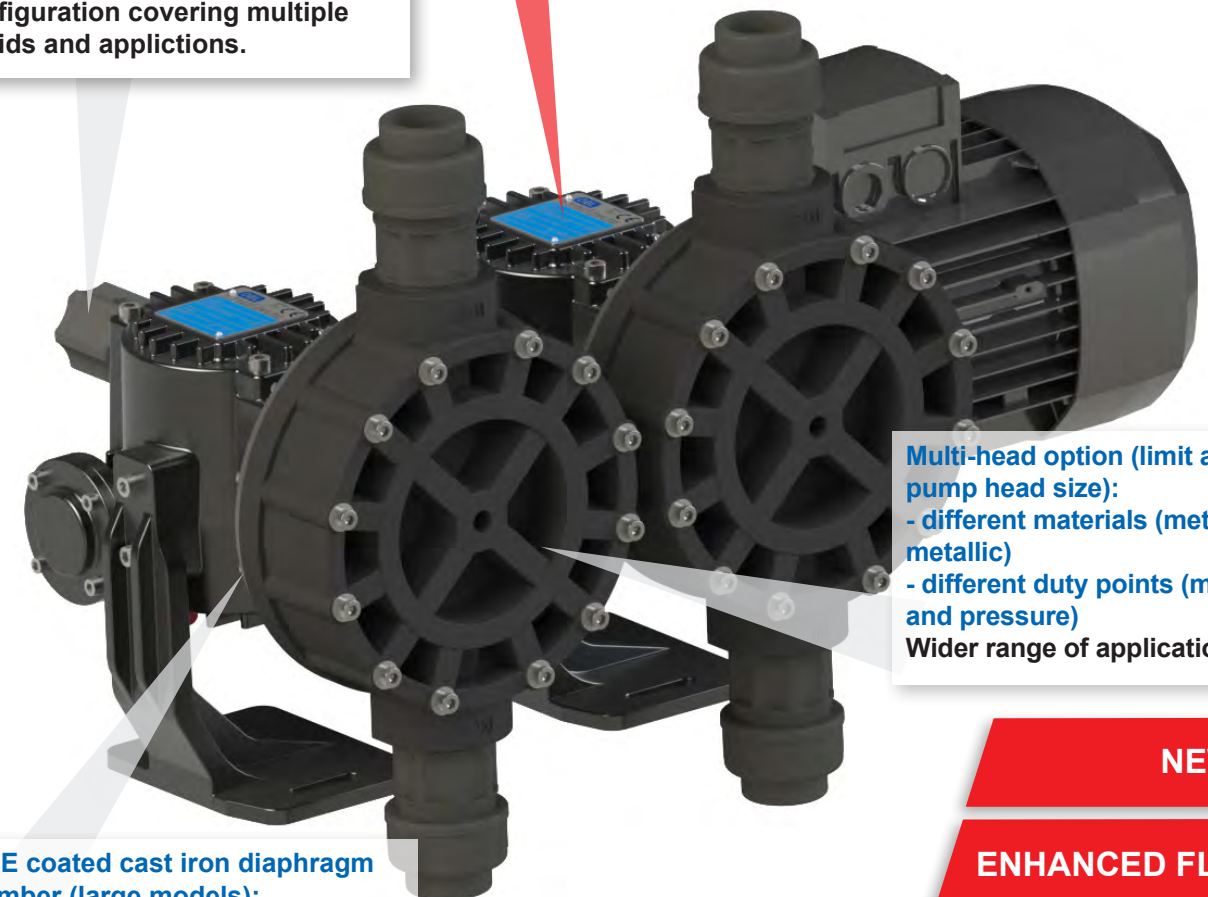
Injection molded PVDF pumphead:



Individual gearbox reducer for each pumphead:
 Now you can have pumpheads with different S.P.M.
Enhanced flexibility.

Individual adjustment for each pumphead:
 Standard manual adjustment via graduated knob or optional extra electric actuator.
 Greater range of applications
Allows standardization on one configuration covering multiple liquids and applications.

All possible combinations up to 10 pumpheads



Multi-head option (limit according to pump head size):
 - different materials (metallic and Non metallic)
 - different duty points (max flow rates and pressure)
Wider range of applications.

PTFE coated cast iron diaphragm chamber (large models):
 Increased resistance in case of liquid spillage to reduce maintenance cost.
Extends pump life and lowers life-cycle cost.

ATEX

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NEW DESIGN

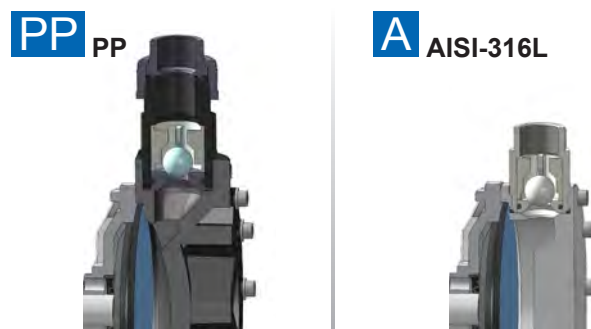
ENHANCED FLEXIBILITY

Duplex unit with manifolds:
 Achieving flowrates up to 1.042 l/h



Sectional view

THREADED CONNECTIONS



FLANGED CONNECTIONS



FEATURES & BENEFITS

Valve & Seat material options: Ceramic, Stainless Steel, Incoloy-825, Hastelloy C-276.

Increased performance when handling high density and viscous liquids as well as highly abrasive and aggressive fluids while minimizing cost impact.

Extends pump life and lowers life-cycle cost.

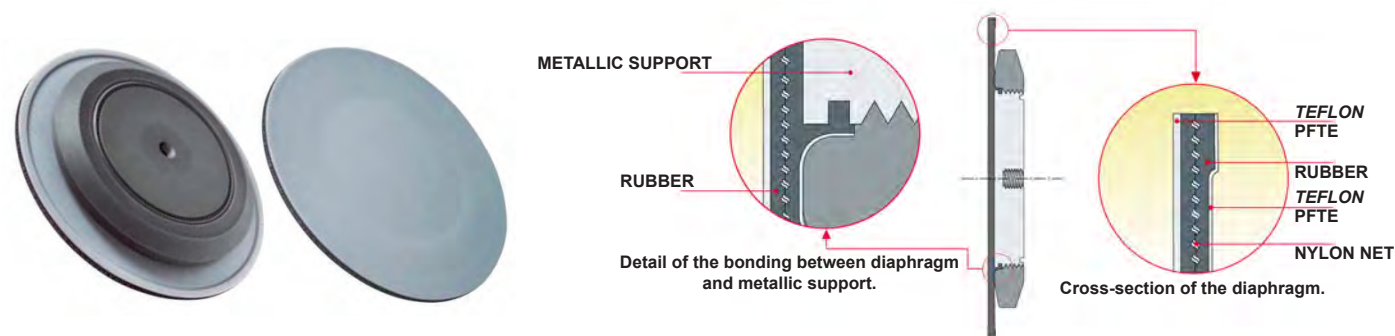
Diaphragm Structure

OBL's mechanical diaphragm operates similar to a plunger by delivering the swept volume of the diaphragm whilst acting as a separating element between casing and liquid end. OBL's unique diaphragm design allows controlled volumetric displacement and ensures a linear proportional flowrate according to stroke length setting.

FEATURE & BENEFITS

PP diaphragm back-support ring: Protection against discharge overpressure.

Reduces downtime and cleanup, "minimizing" chemical exposure.



Flowrate linearity

OBL mechanical diaphragm pumps operation reflects that of a plunger pump providing similar flowrate linearity. This peculiarity is highlighted in the diagram on the left. The progress of the flow lines is clearly linear and proportional to stroke length adjustment.

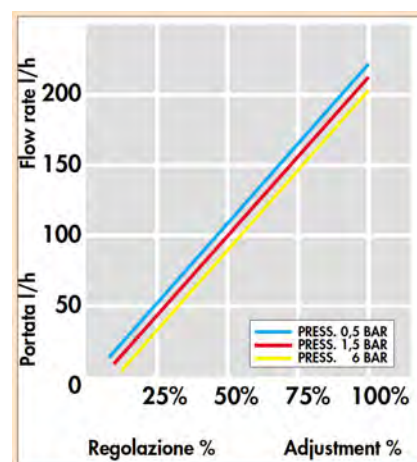
FEATURES & BENEFITS

Multiple layer PTFE diaphragm:

Flowrate is virtually unaffected by working pressure variations (1% less flow with every additional bar above 1,5 barg.)

- Protection against corrosive fumes entering the diaphragm chamber
- Reduced friction thanks to diaphragm supporting-ring
- Optimal leak-free seal thanks to stress-proof diaphragm

Extends pump life and lowers life-cycle cost.



Markets & Applications

OBL pumps are designed to cover the needs of your system and other applications listed below:

BOILERS Water Quality Control



- Corrosion Inhibitors (Oxygen scavengers, etc) Anti-scaling reagents.
- Conductivity control (chemistry adjustment) pH control (acids and caustics).
- ORP (Oxidation-Reduction Potential) Anti-fouling and biological growth control (Biocides).

CHEMICAL



- Various Additive and Reactors (Chemical Reaction Process).
- Drum / Tote.
- Injection, Mixing and much more.

MINING



- Ore Separation: Leaching process (cyanides, sulphuric acid, solvents, etc.).
- Flotation collectors (polymers, etc). Defoamers emulsifiers. Depressants and Dispersant chemicals (Iron sulfide).
- Dust control (Dosing of wetting chemicals).

COOLING TOWERS Water Quality Control



- Corrosion Inhibitors, Anti-scaling reagents, pH control (acids and caustics).
- ORP (Oxidation-Reduction Potential) Anti-fouling and biological growth control (Biocides).

WATER TREATMENT Chemical Addition



- Odors Control (Hydrogen peroxide, Potassium permanganate, Activated carbon).
- Ph control (dosing of acids and caustics).
- Flotation and Clarification (Aluminium Sulfate, PAC, Ferric Chloride).
- Disinfection (Chlorine, Sodium Hypochlorite).

PULP AND PAPER



- Whitening and Bleaching process (Hydrogen Peroxide, Hypochlorite, Chlorine).
- Sizing (fillers, e.g. starch, polymers), Strengthening (Urea based chemicals, etc.), Pigmentation (dyes, pigments, etc).
- De-inking chemicals in recycling paper process (Sodium silicates, Sodium Hydroxide, Lime, Calcium Chloride, etc.).

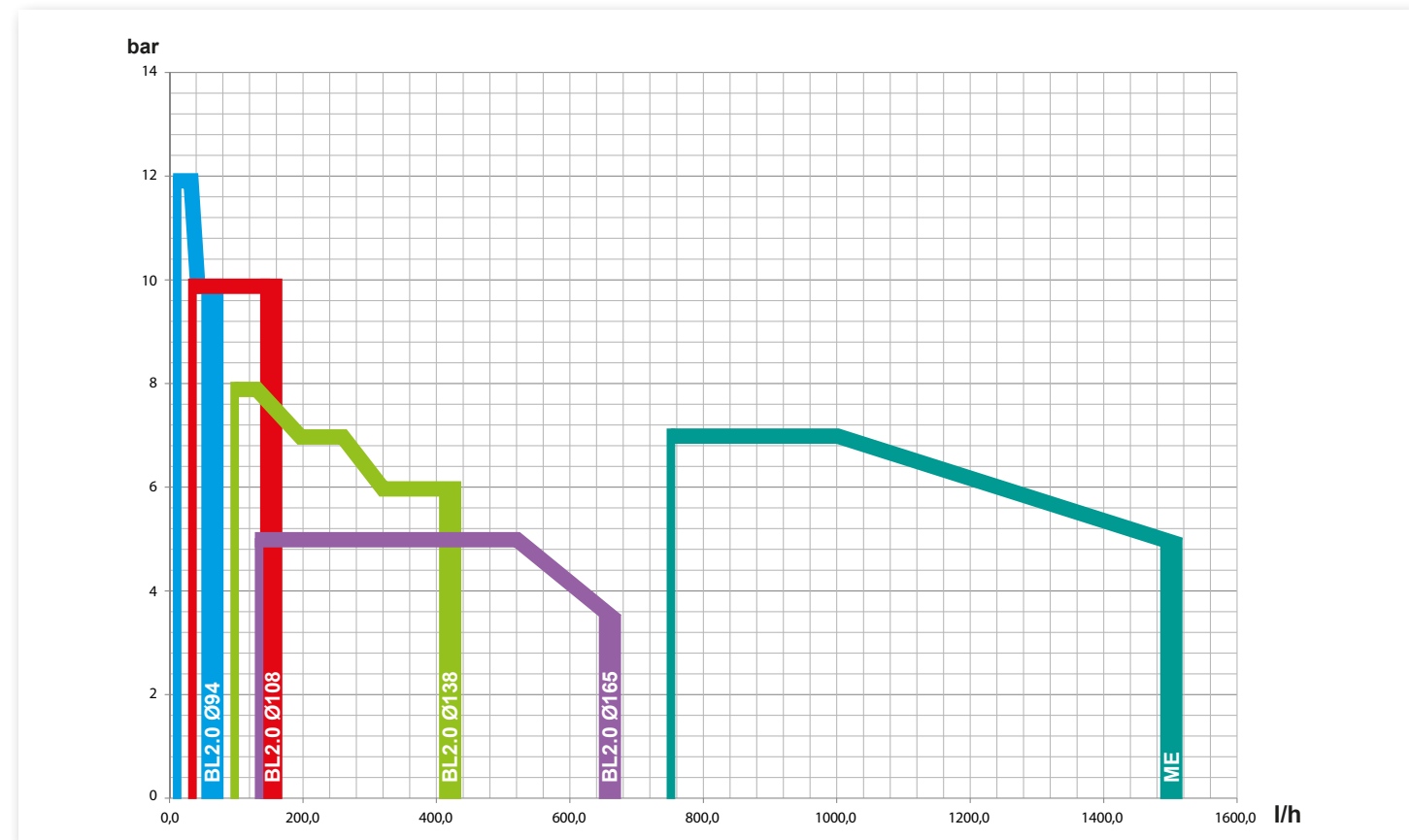
Technical data

Ø DIAPH./ STROKE	50 Hz			60 Hz			MAX PRESS. bar	
	TYPE	STROKES / 1	MAX FLOW RATE l/h	TYPE	STROKES / 1	MAX FLOW RATE l/h	3ph	1ph
2 94	M 7	25	7	M 9	30	9	12	12
	M 11	36	11	M 14	43	14		
	M 16	50	16	M 19	60	19		
	M 23	70	23					
	M 31	95	31	M 28	84	28		
	M 37	115	37	M 36	114	36		
4 108	M 50	155	50	M 45	138	45	10	10
	M 35	36	35	M 42	43	42		
	M 49	50	49	M 58	60	58		
	M 75	70	75	M 90	84	90		
	M 101	95	101					
	M 120	115	120	M 118	114	118		
6 138	M 155	155	155	M 145	138	145	8	8
	M 102	36	100	M 119	43	120		
	M 131	50	132					
	M 201	70	197	M 158	60	158		
	M 261	95	260	M 236	84	236		
	M 321	115	320	M 312	114	312		
6 165	M 421	155	420	M 384	138	384	7	7
	M 150	36	150	M 180	43	165		
	M 190	50	200	M 228	60	228		
	M 301	70	300	M 360	84	350		
	M 431	95	435	M 519	114	515		
	M 521	115	520					
6 165	M 660	155	660	M 620	138	620	3,5	3,5

Material of construction

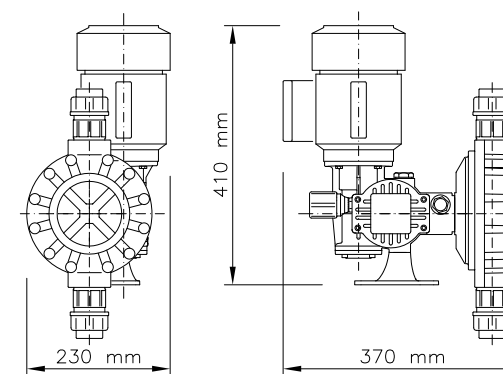
COMPONENTS	A	PP	PP11	PP32	S562
PUMP HEAD	AISI-316L	PP	PP	PP	PVDF
DIAPHRAGM	PTFE	PTFE	PTFE	PTFE	PTFE
VALVE GUIDE	PP	PP	PP	PP	PVDF
VALVE SEAT	AISI-316L	PVC	AISI-316L	INCOLOY-825	PTFE
VALVE (BALL)	AISI-316L	PYREX	AISI-316L	HASTELLOY C-276	PYREX
VALVE HOUSING	AISI-316L	PP	PP	PP	PVDF
VALVE SEAL	FPM	FPM	FPM	FPM	PTFE
FLANGE	AISI-316L	PVC	PVC	PVC	PVDF

Performance

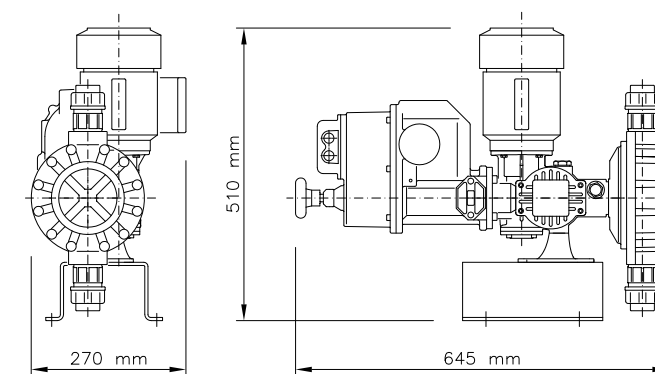


Overall dimensions

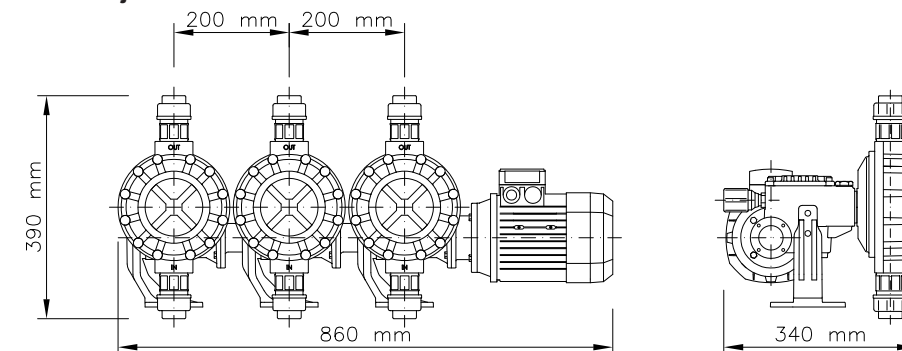
SINGLE PUMP - Manual Adjustment



SINGLE PUMP - Electric Actuator Adjustment



MULTIPLE PUMP - Manual Adjustment



Motor UNEL-MEC:

Motor UNEL-MEC standard 3 phase, 50/60Hz. Single phase and ATEX options available.
Promotes standardization and enables immediate motor availability on site.

Manual adjustment via handwheel and high resolution dial, or via electric stroke actuator as an option.
 Greater flexibility of applications

Spring return mechanism with oversized bearing.
 Extends pump life and lowers life-cycle cost.

Anodized Aluminum Casing:

Improved corrosion resistance against aggressive fumes.
Extends pump life and lowers life-cycle cost.

3pcs threaded connector (PP models), Metric or Inch standard:

BSP or NPT thread allows easy and simple connection to pipeline.
Reduces cost and time of installation and maintenance.

Increased number of pumphead locking screws (12 pcs).
 Reliable and effective sealing during operation.

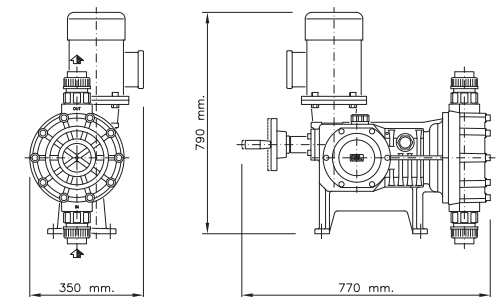
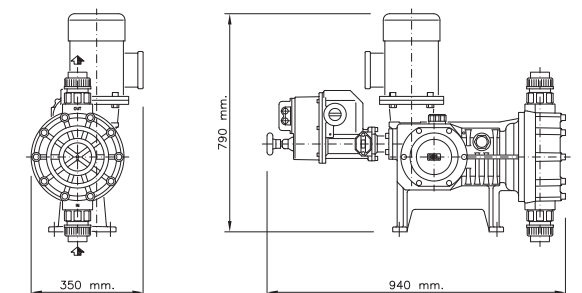
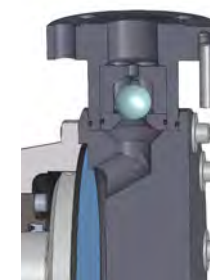
1 Size diaphragm fits all, same valve and seat size on all models:
 Fewer parts to procure and keep on stock.
Improved parts availability and lower cost of ownership.

► **Technical data**

Ø DIAPH./ STROKE	50 Hz			60 Hz			MAX PRESS. bar				CONNECTIONS					
	TYPE	STROKES / 1	MAX FLOW RATE l/h	TYPE	STROKES / 1	MAX FLOW RATE l/h	1,5 kW		2,2 kW		THREADED			FLANGED		
							WORK.	MAX	WORK.	MAX	A	P	PP	A	P	PP
10 239	ME 750	60	750	ME 600	48	600	5	6	6	7	/	/	1-1/2" BSP f	DN 40	DN 40	DN 40
	ME 1000	82	1000	ME 880	72	880	5	6	6	7				1-1/2" ANSI	2" ANSI	2" ANSI
	ME 1250	100	1250	ME 1200	96	1200	4	5	5	6						
	ME 1500	123	1500	ME 1475	121	1475	3	4	4	5						

► **Material of construction**

COMPONENTS	A	P	PP
PUMP HEAD	AISI-316L	PVC	PP
DIAPHRAGM	PTFE	PTFE	PTFE
VALVE GUIDE	AISI-316L	PP	PP
VALVE SEAT	AISI-316L	PVC	PVC
VALVE (BALL)	AISI-316L	PYREX	PYREX
VALVE HOUSING	-	PVC	PP
VALVE SEAL	FPM	FPM	FPM
FLANGE	AISI-316L	PVC	PVC

► **Overall dimensions****SINGLE PUMP - Manual Adjustment****SINGLE PUMP - Electric Actuator Adjustment**► **Sectional view****THREADED CONNECTION****PP** PP**FLANGED CONNECTIONS****PP** PP**P** PVC**A** AISI-316L**ATEX**

i All models comply with ATEX (2014/34/CE) Group II, Category 3 (zone 2/22).

► Safe area

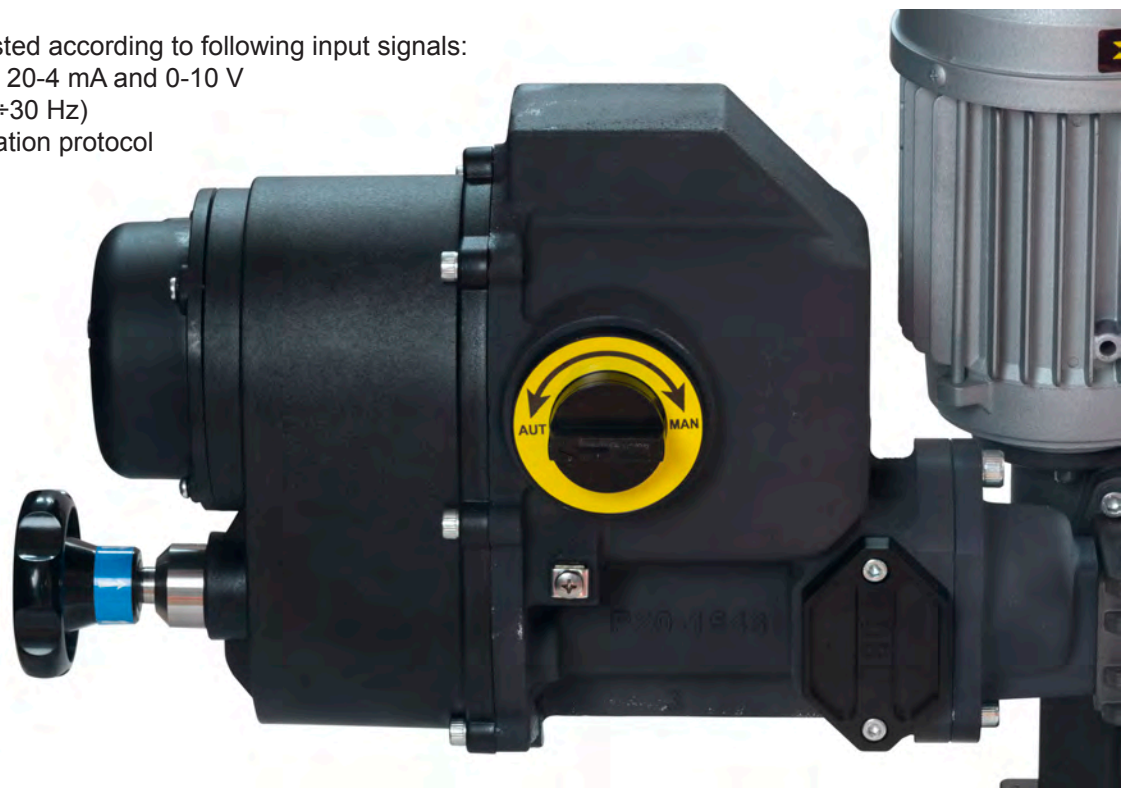
OBL Z type electric actuator, option available on all Blackline pump models M, ME, R, XRN remotely controls the pumps flowrate via input signal.

ELECTRIC ACTUATOR CHARACTERISTICS

- IP 66 standard
- 115/230V – 1 – 50/60 Hz
- 4-20 mA feedback signal
- Manual emergency override
- Anticondensation heater (on demand)
- External automatic/manual selector (on demand)
- Flow-rate limiter (Q.max trimmer) allows to reduce the pump maximum flow-rate (corresponding to 20 mA command signal) up to 50% of the nameplate rated capacity.

The flowrate is adjusted according to following input signals:

- 4-20 mA, 0-20 mA, 20-4 mA and 0-10 V
- Pulses (0÷2 Hz - 0÷30 Hz)
- RS 485 communication protocol
- Profibus DP-V0



OBL DESIGN

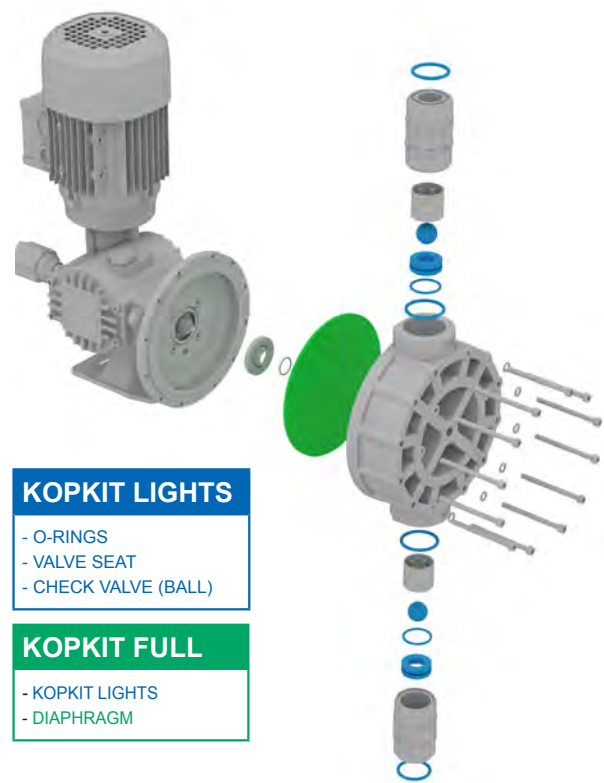
OBL has a solution whether your pump needs quick, urgent maintenance or a full service repair.

REPAIR IT ONCE, REPAIR IT RIGHT !

Everything in one place! All the parts you need to get pumping again.
Increase uptime! Maximize your productivity with fewer repairs.

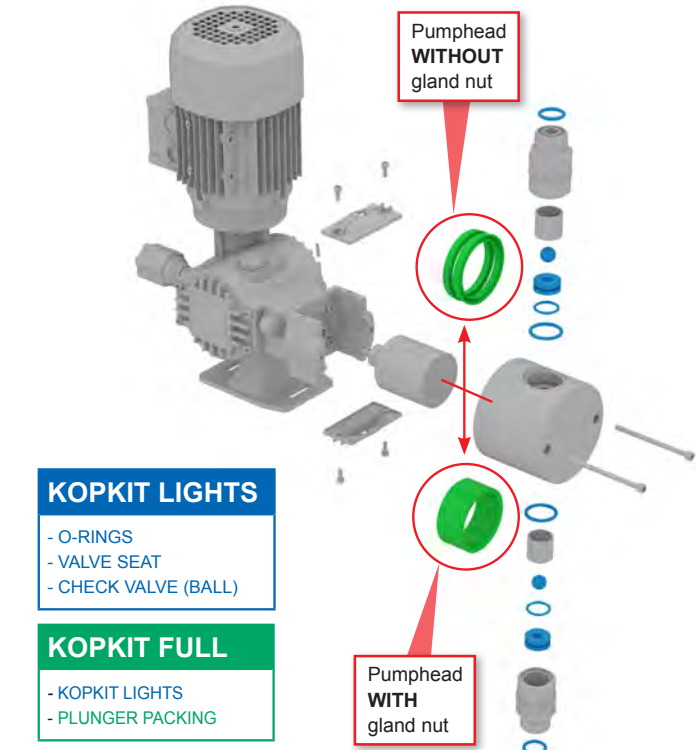
Reduce Frequency of repairs ! Reliable replacement parts, guaranteed to last.
SAVE TIME AND MONEY! Simplicity in both ordering and replacing parts.

► M PUMPS



- KOPKIT LIGHTS**
 - O-RINGS
 - VALVE SEAT
 - CHECK VALVE (BALL)
- KOPKIT FULL**
 - KOPKIT LIGHTS
 - DIAPHRAGM

► R PUMPS



- KOPKIT LIGHTS**
 - O-RINGS
 - VALVE SEAT
 - CHECK VALVE (BALL)
- KOPKIT FULL**
 - KOPKIT LIGHTS
 - PLUNGER PACKING

LEARN MORE AT
www.oblblackline.com

We show how easy it is to repair your pump with detailed service videos that teach you how to correctly maintain your OBL pump. Follow the advice of our experienced team.



OBL
GENUINE SPARE PARTS

- SAVE MONEY BY ORDERING PART KITS
- Ordering parts kits as opposed to individual components:
- Reduces frequency of repairs
 - Reduced downtime
 - Reduces cost
 - Increases uptime
 - Improves parts availability
 - Extends service life



OBL Genuine Spare Parts, keep your pump running at optimal levels.

OBL has built a reputation for superior reliability by supplying carefully designed high-quality products. However, even the best equipment requires minimal preventative maintenance. OBL offers KOPKITS designed to avoid unnecessary downtime and guarantee the highest level of efficiency and uninterrupted service from your OBL pump. Many Pump models have a unique KOPKIT containing all the parts necessary to ensure reliable operation. KOPKITS come in two variants: KOPKIT light and KOPKIT full. the KOPKIT is your best friend when it comes to breakdowns, it will get you back in business fast! Preventative maintenance will ensure continued high performance from your pump. OBL ensures ready availability of KOPKITS for most pumps.

► All of the items you need to complete your system

Thanks to obl's experience, we can provide many of the accessories to complete systems for almost all applications. This page shows some examples designed to meet different customer needs.

Enhanced Pump Performance and Productivity

Extended MTBF (Mean Time Between Failure)

Protect Ancillary Equipment in Fluid Flow Path

Enhance Safety and Environmental Responsibility

Precise Pump Control and Dosing efficiency.

CALIBRATION POT

Provides a verification of the actual flow rate of your chemical dosing pump. The calibration pot must be installed on the supply side of the pump. It is not essential but is extremely useful when dosing hazardous chemicals, or when a pulsation damper is absent on the discharge line or in any situation where it is difficult to determine and verify the pumps flow rate.

PULSATION DAMPENER

It is particularly important in a dosing process when using reciprocating metering pumps, many are the benefits of its installation:

- Protects the pump from high pressure peaks (water hammer effect) and increases lifespan of the pump and system
- Flow rate becomes continuous with a linear flow, increasing the reliability and ease of the dosing process.
- Significant reduction of vibrations transmitted along the discharge line
- Helps reduce noise emission of the pump

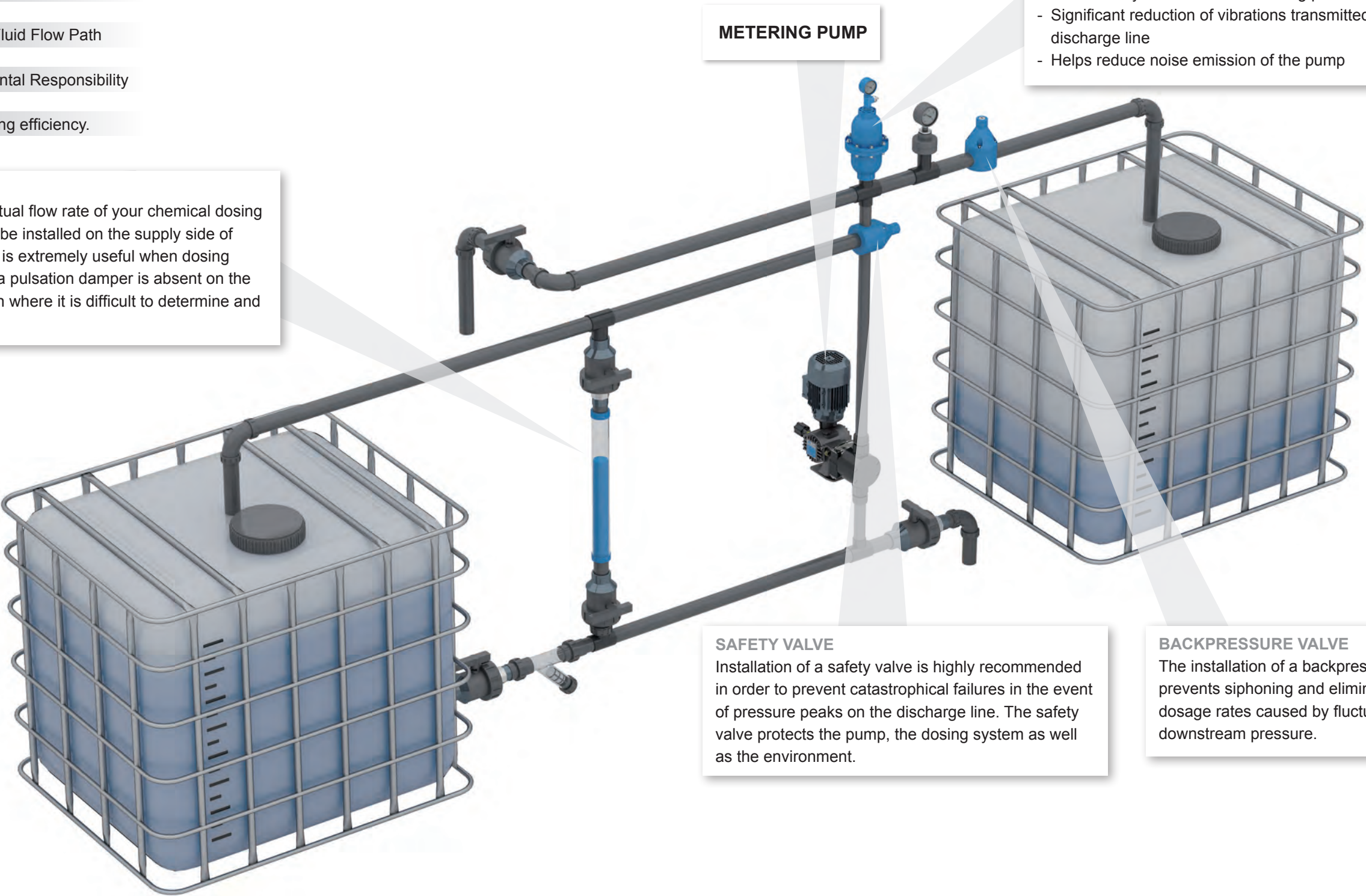
METERING PUMP

SAFETY VALVE

Installation of a safety valve is highly recommended in order to prevent catastrophic failures in the event of pressure peaks on the discharge line. The safety valve protects the pump, the dosing system as well as the environment.

BACKPRESSURE VALVE

The installation of a backpressure valve prevents siphoning and eliminates varying dosage rates caused by fluctuating downstream pressure.



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